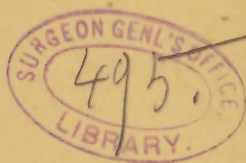


DIXON (Sam'l. G.)

The bile-salts, Urea, &c
as therapeutic agents.



Dixon (Saml G.)



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Therapeutic Agents.*

—BY—

SAMUEL G. DIXON, M. D.

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YOUNG MEN: This intrusion upon your regular curriculum of medical study just now, when you are all hard at work preparing for arduous examinations, may not permit you to welcome the remarks I have to make regarding my new treatment for tuberculosis of the skin. However, as I was once in just such a perilous situation, I will be exceedingly brief, and therefor trust you will take a hearty interest in this, the most momentous medical subject of the day. This expression may sound exaggerated, until you call to mind the fact that one seventh of the deaths in the human family are caused by tuberculosis. For this reason I have devoted some years to the study of the heretofore almost unconquerable malady. I expressed, in the Medical News of October 19, 1889, a probability of producing immunity by inoculations of an involution form of the tubercle bacillus. While engaged in that work, I discovered a toxic substance, produced by or in the tubercle bacillus, which gave

*Clinical lecture delivered at the Medico-Chirurgical Hospital.

most satisfactory results when injected into animals suffering with tuberculosis. ("Proceedings of The Academy of Natural Sciences of Philadelphia," November 18, 1890.)

This substance, since called tuberculin, was introduced into the human economy by Professor Koch, the results of which are yet *sub judice*. Personally, I have not yet felt justified in using tuberculin in man. My hesitation is due to its extremely toxic nature, and from the fact that I gravely suspect the micro-organism to be capable of spore formation. If so, it is possible that it would grow when introduced into a predisposed tissue, while it would appear dead when placed in the circulation of healthy animals, or those with artificially produced tuberculosis. This may account for the general miliary tuberculosis sometimes caused by its introduction into the circulation of man.

Having these possibilities before me when working with tuberculosis on the lower animals, my object being not only to cure consumption, but also to produce immunity, I recognized the fact that immunity exists in animals which have not had tuberculosis nor been inoculated against the same. At least, this would appear to be so in man, when we consider the fact that one seventh of our people have tuberculosis, while it is fair to believe that nearly seven sevenths are exposed to the poison. This, most likely, is due to the difference in the constituents of the animal body; and yet we have been quite unable to recognize, either by a microscopic or chemical examination, any difference between susceptible and non-susceptible tissues. Therefore, we are, while in this state of ignorance obliged to look around for something that will indicate a possible difference and follow out any idea

that has the least promise of rendering the body unsuited for the tubercle bacillus, or, in other words, for that which will change soil suited for its propagation and growth to soil in which such growth cannot be effected. With this in view, and recognizing that animals leading a sedentary life, and often fed on concentrated food-stuff, frequently have sluggish livers, I proposed to introduce the bile-salts into the cellular tissues of tuberculosis animals. The first results of this experiment I referred to as early as November 18, 1890, in the "Proceedings of The Academy of Natural Sciences of Philadelphia." The taur-ocholate and glycocholate of soda were used, principally the latter, as it is much more abundant in many non-susceptible animals than in animals susceptible to tuberculosis. These salts also should help in the assimilation of fats, and, consequently, aid indirectly in the formation of new and healthy tissue. While these investigations, with many others, which I will not now mention, were being worked out, I was looking around for pathological conditions not usually accompanied with tuberculosis, such as erysipelas, and others. Gout, however, impressed itself very favorably upon my mind as a condition that might be temporarily produced without doing injury to the patient, and, possibly, change the soil of tuberculous man, as gout and tuberculosis do not often co-exist.

The first results, based on the theory of the gouty condition being antagonistic to tuberculosis, were obtained in a few small animals, referred to in my article entitled "Reaction of the Amide Group upon the Wasting Animal Economy," Times and Register, September, 1890. In these experiments I used each member of the group, creatin, urea, uric acid, etc.

Since my first publication of the use of taurin, creatin, urea, uric acid, etc., I have obtained some most encouraging results. The action of taurin and urea on tuberculosis of the skin will be illustrated by a case which I will show you to-day, as it is under treatment by this group. One of the patches of lupus is practically dead. However, before showing you the case, I desire to call your attention to the fact that since I began to use urea a vegetable substance which might be considered a modification of urea has come into use abroad as a therapeutic agent for tuberculosis, and, according to the reports, is promising in its action. From the fact that it so nearly resembles that which I have used with more or less success since 1891, I see no reason why it should not produce the desired change. My results, coupled with the favorable reports regarding the action of this vegetable product, thiosinamin, confirm the belief that the truth of my theory of changing the soil with these substances is now about to be confirmed, and we will be able from this on to treat successfully a large proportion of the cases of tuberculosis of the skin, and possibly of the lungs.

While my theory has suggested the use of what I believe to be a remedy for tuberculosis in, at least, one of its forms, further scientific and clinical experience will likely explain the exact action of these substances upon the tissues effected with tuberculosis.

